Preliminary Syllabus

ESCI 323: EARTH STRUCTURE AND DEFORMATION
Spring 2012

Lecture: MWF 10:00 - 10:50 AM
Lab: Th 1:00 - 4:00 PM
Professor: Julia Morgan
TA: Sarah Dean

Text: van der Pluijm, B.A., and Marshak, S. (2004) **Earth Structure: An Introduction to Structural Geology and Tectonics** (2nd edition)
Background: Press, Siever, Grotzinger, and Jordan (2003): **Understanding the Earth**.

Lab Text: Rowland, S.M., Duebendorfer, E.M., and Schiefelbein, L.M. (2007): **Structural Analysis and Synthesis: A Laboratory Course in Structural Geology** (3rd Edition), Wiley-Blackwell, 320 pp. [ISBN: 978-1-4051-1652-7]

Grading Criteria: ESCI-323 (4 Cr): Exams - 60%; Participation & quizzes – 15%; Lab - 25%.

Week	Date	Topic	Text	Lab
Week I	Jan 09	Introduction & Plate Tectonics	Ch. 1,14	
	Jan 11	Structures -Tectonic & Non-	Ch. 2	
	Jan 13	Force & Stress	Ch. 3	Ch. 1
Week II	Jan 17	***MLK DAY – NO CLASS***		
	Jan 19	Brittle Deformation	Ch. 6	
	Jan 21	Joints & Veins	Ch. 7	Ch. 2,4
Week III	Jan 23	Faults and Faulting	Ch. 8	
	Jan 25	Earthquakes	Ch. 8	
	Jan 27			Ch. 5
Week IV	Jan 30	Fault Geometries & Systems		
	Feb 01			
	Feb 03	Deformation & Strain	Ch. 4	Ch. 13
Week V	Feb 06	Folds & Classification	Ch. 10	
	Feb 08			
	Feb 10	Fabrics & Classification	Ch. 11	Ch. 6
Week VI	Feb 13			
	Feb 15	Strain Analysis	Ch. 4	
	Feb 17			Ch. 7
Week VII	Feb 20	Rheology	Ch. 5	
	Feb 22			
	Feb 24	EXAM #1 (19 LECTURES)		Ch. 14
Week VIII	Feb 27	***SPRING BREAK – NO CLASS***		
	Feb 29	***SPRING BREAK – NO CLASS***		
	Mar 02	***SPRING BREAK – NO CLASS***		***NO LAB***
Week IX	Mar 05	Ductile Defm & Microstructures	Ch. 9	
	Mar 07			
	Mar 09	Ductile Shear Zones	Ch. 12	Ch. 12
Week X	Mar 12			
	Mar 14	Defm, Metamorph. & Time	Ch. 13	
	Mar 16			Ch. 16
Week XI	Mar 19			
	Mar 21	Regional Structure & Tectonics	Ch. 14	
	Mar 23	***SPRING RECESS – NO CLASS***		***NO LAB***

Any student with a disability requiring accommodations in this class is encouraged to contact me after class. Additionally, students should contact the Disabled Student Services office in the Ley Student Center.

Week XII	Mar 26	Divergent Tectonics	Ch. 16	
	Mar 28			
	Mar 30			Ch. 17
Week XIII	Apr 02	Convergent Tectonics	Ch. 17,18	
	Apr 04			
	Apr 06			Ch. 9
Week XIV	Apr 09	Strike-slip Tectonics	Ch. 19	
	Apr 11			
	Apr 13			Ch. 10
Week XV	Apr 16	Gravity & Salt Tectonics		
	Apr 18			
	Apr 20	EXAM # 2 (19 LECTURES)		Ch. 15

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